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WORK EXPERIENCE

Amazon Alexa AI | Applied Scientist II

Jun 2020 – Present

Answer ranking and generation QA models as part of a web question answering pipeline for Alexa. Question understanding models for improving efficiency of Alexa’s open-domain QA system. Supervised 5 research intern projects.

Amazon Alexa AI | Applied Scientist Intern | Advisor: Alessandro Moschitti

Jun 2019 – Sep 2019

Sequential transformer fine-tuning techniques for answer selection via a new large noise-free dataset (ASNQ).

Results on WikiQA & TrecQA beating previous SOTA by ~10% rel. Research paper accepted at AAAI ’20 (Oral).

SELECTED PUBLICATIONS

- **Will this Question be Answered? Question Filtering via Answer Model Distillation for Efficient QA**
Siddhant Garg, Alessandro Moschitti • [Paper] [Slides] [Poster] **EMNLP 2021(Oral)**
- **TANDA: Transfer and Adapt Pre-Trained Transformer Models for Answer Sentence Selection**
Siddhant Garg, Thuy Vu, Alessandro Moschitti • [Paper] [Code] [Blog] [Slides] **AAAI 2020(Oral)**
- **BAE: BERT-based Adversarial Examples for Text Classification**
Siddhant Garg, Goutham Ramakrishnan** • [Paper] [Code] [Blog] [Slides] [Video] **EMNLP 2020**
- **Surprisingly Easy Hard-Attention for Sequence to Sequence Learning**
Shiv Shankar, Siddhant Garg*, Sunita Sarawagi* • [Paper] [Code] [Slides] [Video] **EMNLP 2018(Oral)**
- **Functional Regularization for Representation Learning: A Unified Theoretical Perspective**
Siddhant Garg, Yingyu Liang • [Paper] [Code] [Slides] [Video] **NeurIPS 2020**
- **Paragraph-based Transformer Pre-training for Multi-Sentence Inference**
Luca Di Liello, Siddhant Garg, Luca Soldaini, Alessandro Moschitti • [Paper] [Code] [Poster] **NAACL 2022**

EDUCATION

University of Wisconsin Madison

Aug 2018 – May 2020

MS (Thesis) Computer Science • CGPA: 3.96/4.0 • Advisor: Prof. Yingyu Liang

Madison, WI, USA

Thesis: Understanding Representation Learning Paradigms with Applications to Low Resource Text Classification [Report]

Indian Institute of Technology (IIT) Bombay

Jul 2014 – May 2018

B.Tech. Computer Science & Engineering • CGPA: 9.59/10.0 • Advisor: Prof. Sunita Sarawagi

Mumbai, MH, India

Thesis: Structured Attention Sequence to Sequence Models [Slides]

ACADEMIC SERVICES AND AWARDS

Conference & Journal Reviewer: EMNLP ’19 ’20 (**Outstanding Reviewer**) ’21 ’22, ACL ’20 ’21 (**Outstanding Reviewer**), NAACL ’21, NeurIPS ’20 (**Top 10% of Reviewers**) ’21 ’22, ICML ’21 (**Top 10% of Reviewers**), ICLR ’22, AAAI ’20 ’21, ACL Rolling Review (Nov’21 - Mar’22), SIGIR ’21, ESANN ’20, JAIR, IEEE TNNLS

Teaching Assistant: Artificial Intelligence ’18, CS Programming ’18, Computer Architecture ’17, Data Analysis ’16

Scholarships: Awarded Graduate Scholarship ’18 at UW Madison (Top 2%), KVPY Fellowship - Dept. of Science & Technology Govt. of India ’13, NTSE Scholarship - Dept. of Science & Technology Govt. of India ’10

Achievements: All India Rank 9 in KVPY ’13 among 3 lakh candidates, All India Rank 191 in JEE Advance ’14 among 1.5 lakh selected candidates, Best Social Impact Project at Tech and RnD Expo IIT Bombay ’15.

OTHER PEER-REVIEWED FIRST-AUTHOR PAPERS

- Towards Robustness to Label Noise in Text Classification via Noise Modeling • [Paper] [Code] [Video] **CIKM 2021**
- Beyond Fine-tuning: Few-Sample Sentence Embedding Transfer • [Paper] [Video] [Slides] **AAACL-IJCNLP 2020**
- Can Adversarial Weight Perturbations Inject Neural Backdoors? • [Paper] [Code] [Video] **CIKM 2020**
- Stochastic Bandits with Delayed Composite Anonymous Feedback • [Paper] [Poster] **NeurIPS 2019 MLWG**

PAPERS UNDER SUBMISSION

- **Pre-training Transformer Models with Sentence-Level Objectives for Answer Sentence Selection** **ARR**
- **Context-Aware Transformer Pre-Training for Answer Sentence Selection** **ARR**
Luca Di Liello, Siddhant Garg, Luca Soldaini, Alessandro Moschitti
- **Knowledge Transfer from Answer Reranking to Answer Generation** **ARR**
Matteo Gabburo, Rik Koncel-Kedziorski, Siddhant Garg, Alessandro Moschitti